

REMARKS

In the January 30, 2004 Office Action, the Examiner objected to Figures 2 through 4b because “they fail to show necessary textual labels of features or symbols.” The enclosed replacement drawings have been amended to include textual labels in accordance with the specification of the application.

Applicants thank the Examiner for the acknowledgement of Applicants’ claim for foreign priority. Applicants will file a certified copy of the United Kingdom priority application under separate cover.

Claims 1-46 are pending in this application.

The Examiner rejected claims 1-46 (including independent claims 1, 24-28, 35-38, and 43-46) under 35 U.S.C. §103(a) as unpatentable over Borgendale et al. (U.S. Pat. No. 5,734,568) in view of Higgins et al. (U.S. Pat. No. 5,805,710) and Penteroudakis et al. (U.S. Pat. No. 6,651,220). The Examiner asserts that one of ordinary skill in the art would have been motivated to combine ‘Borgendale’s data processing system for correction of mail address information with Higgins’ method of recognizing cursive addresses on mail pieces because Higgins’ method enables dictionary management to recognize the cursive address of mail pieces....” The Examiner, however, admits that “Borgendale does not expressly teach a dictionary corresponding to at least one postal address,” and that “Higgins does not expressly teach searching a dictionary of entries in the dictionary corresponding to one or more input terms in the form of a tree data structure.” Recognizing that more is needed, the Examiner also points to Penteroudakis, which, according to the Examiner, discloses a “dictionary [] in the form of a tree data structure [] having a plurality of nodes [] and a multiplicity of leaf nodes.” The Examiner argues that it would be obvious to combine “the dictionary management means of Higgins’ method with the electronic dictionary means of Penteroudakis’ method because Penteroudakis’ method enables retrieving information from an electronic dictionary while storing all information about words that have the same normalized form into a single entry within the electronic dictionary.”

With regard to Borgendale, this reference discloses a data processing system and method for the correction of address information on mail. The method uses a contextual predictive keying method for enabling an operator to read an image of an addressee mailing address and type a minimum of keystrokes to sort the mail down to the final sorting level.

(Abstract) Applicants agree with the Examiner that Borgendale does not disclose a dictionary corresponding to at least one of the postal addresses.

The Examiner asserts that a dictionary disclosed by Higgins could be combined with Borgendale. Applicants respectfully disagree. Higgins discloses a dictionary management system that includes a static database 121 and a dynamic portion 123. (Col. 11, l. 56 to col. 12, l. 10) The static database holds “the most frequently observed words of a particular type, for example state, city, street, derived from training data.” (Col. 11, ll. 56-61) The dynamic portion of the dictionary management system 123 uses “continuously updated statistics to define the order of search used by the word recognition engine.” (Col. 11, l. 66 to col. 12, l. 1) Higgins further states, “Multiple dictionaries or data bases are needed in order to properly interpret an address block. With the position of the words in the address block helping to determine which dictionary to use.” (Col. 11, ll. 48-51) Further, the Abstract of Higgins states, in part:

A method of cursive address recognition of mail pieces using adaptive dictionary management is provided which includes creating a plurality of word databases containing the most frequently observed words in a particular portion of an address block derived from training data. Word images from various portions of the address block are extracted and the word images are compared to the database corresponding to the appropriate portion of the address block using a cursive word recognition engine.

(Emphasis added)

Regarding independent claims 1, 24-28, 35-38, and 43-46, the combination of Borgendale and Higgins fails to describe a system with the claimed “dictionary” and “first database” limitations from the claims. Higgins, for example, discloses the use of multiple dictionaries to quickly identify words and aid in cursive word recognition. It does not disclose the claimed “dictionary” (nor does Borgendale). Independent claims 1, 24-28, 35-38, and 43-46 require (from claim 1) “a first database including data representing the plurality of postal addresses, each postal address being formed of one or more postal address elements.” Higgins relates to word recognition of address elements, not recognition of an address itself or of combined address elements. The arrangement according to Higgins could deliver, as an output, a combination of address elements, where the combination does not actually exist as an actual address. This is contrary to the claimed invention. Thus,

Higgins also does not disclose the claimed "first database." Therefore, Higgins combined with Borgendale does not teach the claimed "dictionary" and "first database" in the present application.

Further, even if all of the claimed features were taught by Higgins and Borgendale, Applicants submit that one of ordinary skill in the art would not combine Higgins with Borgendale because of the increased possibility, introduced by Higgins, of incorrect machine-read address block information being supplied as an output.

Independent claims 1, 24-27, 38 and 43-46 also require that the "dictionary [or database] is in the form of a tree data structure." The Examiner cites Penteroudakis for this feature. Applicants, however, submit that Penteroudakis does not disclose this feature.

Penteroudakis is directed to a machine understanding of natural language that uses a morphological analysis to identify input words and provide information for each word that a human could determine using a dictionary. (Col. 1, ll. 28-30) The Summary of the Invention in Penteroudakis states, in part:

The present invention is directed to a method and system for locating information in an electronic dictionary. The system creates the electronic dictionary by first generating a normalized form from the canonical forms of the word to be stored in the dictionary. The canonical, or conventional, form of a word uses the appropriate upper and lower case letters and the appropriate diacritical marks. The canonical form of a word is the form in which the word would appear as a key for an entry in a conventional printed dictionary. The normalized form of a word has all lower case letters and no diacritical marks.

(Col. 7, ll. 55-61)

Thus, the electronic dictionary of Penteroudakis remains in alphabetical order, with the principal characteristic being the normalization of words, where the normalized word has letters in all lower case and no diacritical marks.

Penteroudakis, therefore, does not disclose a "dictionary [] in the form of a tree data structure." In particular, Penteroudakis discloses the generation of a plurality of tree data structures from input information by looking up the input information in an electronic dictionary in which the entries are in alphabetical order, as in a conventional language dictionary. Thus, Penteroudakis does not disclose the claimed feature of independent claims 1, 24-27, 38 and 43-46 of a "dictionary [or database] [] in the form of a tree data structure."

For this additional reason, the combination of Borgendale, Higgins, and Penteroudakis does not render claims 1, 24-27, 38 and 43-46 obvious.

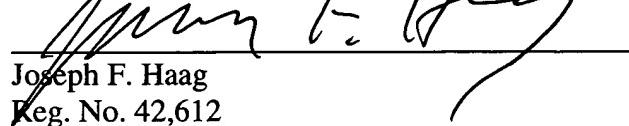
For the reasons stated above, we believe that all of the pending claims are allowable and therefore ask the Examiner to pass them on to issue.

Applicant further submits a Petition and fee for a three-month extension of Time for Response.

Please apply any charges not covered, or any credits, to Deposit Account No. 08-0219.

Respectfully submitted,

Date: 7-30-2004



Joseph F. Haag
Keg. No. 42,612

Hale and Dorr LLP
60 State Street
Boston, MA 02109
Telephone: (617) 526-6000
Facsimile: (617) 526-5000